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**SPECIAL DATA COLLECTION SYSTEM EVENT
REPORT: MEXICO-GUATEMALA BORDER, 22
AUGUST 1975**

K. J. Hill, et al

**Teledyne Geotech
Alexandria, Virginia**

December 1975

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SDCS-ER-75-43

**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Mexico-Guatemala Border, 22 August 1975**

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December 1975

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SDCS Event Report No. 43

Mexico-Guatemala Border, 22 August 1975.

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival Time	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	23:20:46.6	23:08:46	16 N	093 W	5.4	N/A
Hagfors	23:20:53.3	23:07:16	2 N	097 W	5.7	5.4

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

23:08:14.5 14.7N 093.5W 5.2 5.0

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at WH2YK, CPSO, RK-ON, FN-WV, LASA and NORSAR. The horizontal SP channels at all SDCS stations were rotated. High-level background noise prevented determination of signal arrival at HN-ME. At WH2YK all SP channels displayed high-level background noise.

Long-period signals were recorded at WH2YK, CPSO, HN-ME, FN-WV, ALPA and LASA. Horizontal channels at WH2YK, CPSO, HN-ME and FN-WV were rotated. At RK-ON both the vertical and transverse LP channels were inoperative and the radial LP channel operated at an unknown gain. NORSAR long-period array data were not recoverable. Validity of the ALPA long-period vertical beam is uncertain.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SEC'S	ELEVATION METERS	INSTRUMENTATION SHORT-PERIOD LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 30.0 W	626	None
CPSO	McMinnville, Tennessee	35 35 41.4 N 685 34 13.5 W	574	6480 V 7515 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	7505A V 8700C H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	SL210 V SL220 H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	7505A V 8700C H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be $316^\circ + 5^\circ$ based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 22 AUG 75
 23:08:10.0 13.999N 93.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	PEST		
CPO	23 13 10.6	0.5	1.1	22.0	17.4
FN-WV	23 13 55.0	-0.6	-0.4	26.8	24.8
LAC	23 14 56.4	-0.2	0.2	33.6	344.1
RK-CN	23 15 15.4	0.1	-1.6	36.1	359.8
WH2YK	23 17 46.1	0.1	0.6	54.8	336.5
NAC	23 20 46.6	0.2	0.1	84.1	28.5

67 HERRIN TRAVEL TIME TABLES

CRIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
23:09:16.6	17.697N	93.098W	440. CAIC	0.4	7	6
23:08:14.5	14.692N	93.461W	0. REST	0.9	3	6

CALC	REST
3 . 1	3 . 2
0 . 0	0 . 0
0 . 0 . 2 0	0 . 0 . 1 0
0 . 0 . 0 0	0 . 0 . 0 0
0 . 0 . 0	0 . 0 . 0
0 . 0	0 . 0

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF.. LEVEL, SDV= 1.25
 MAJOR 80.4KM. MINOR 52.8KM. AZ= 174 AREA= 13354 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 22 AUG 75
 23:08:10.0 13.999N 93.000W 0KM.

STA.	PHASE	ARRIVAL				MAGNITUDE		
		TIME	INST	PER	A/T	MB	MS	DIR
CPC	EP	23 13 10.6	SPZ	1.0	589.	5.67		22.0
CPC	LR	23 23 22.0	LPZ	18.0	589.	5.23		22.0
PN-WV	EP	23 13 55.0	SPZ	1.0	27.	4.61		26.8
PN-WV	LR	23 25 13.0	LPZ	22.0	374.	5.12		26.8
IAC	EP	23 14 56.4	SAP	1.2	268.	5.83		33.6
IAC	LR	23 30 05.0	LPZ	20.0	201.	4.95		33.6
RK-ON	EP	23 15 15.4	SPZ	1.0	52.	5.01		36.1
HN-ME	LR	23 31 46.0	LPZ	23.0	117.	4.77		38.0
WH2YK	EP	23 17 46.1	SPZ	0.7	9.	4.45		54.8
WH2YK	LQ	23 40 00.0	LPT	18.0	538.			
WH2YK	LR	23 44 52.0	LPZ	17.0	347.	5.40		54.8
ALPA	LR	23 49 33.0	LPZ	19.0	60.	4.69		62.2
NAC	EP	23 20 46.6	AB	1.0	108.	5.73		84.1

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
23:09:16.6	17.697N	93.098W	440. CALC	4.64	0.62	5	4.99	0.3	6
23:08:14.5	14.692N	93.461W	0. REST	5.22	0.61	6	5.03	0.3	6
CPC NOT USED IN CALC RUN SP AVG. MAG.									

CPS0 22 AUG 75

23:13:10.6



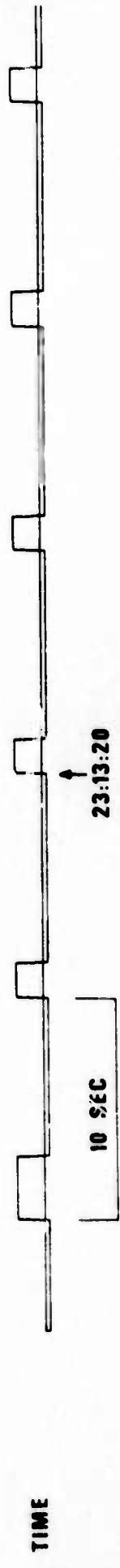
SPZ
140 3 M μ



SPR
61.97 M μ



SPT
28.27 M μ

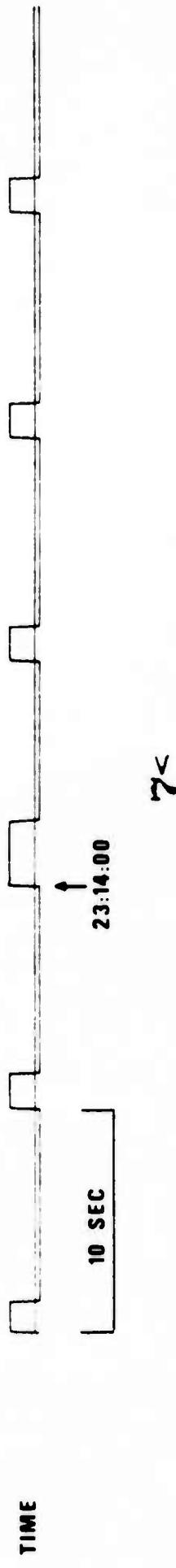
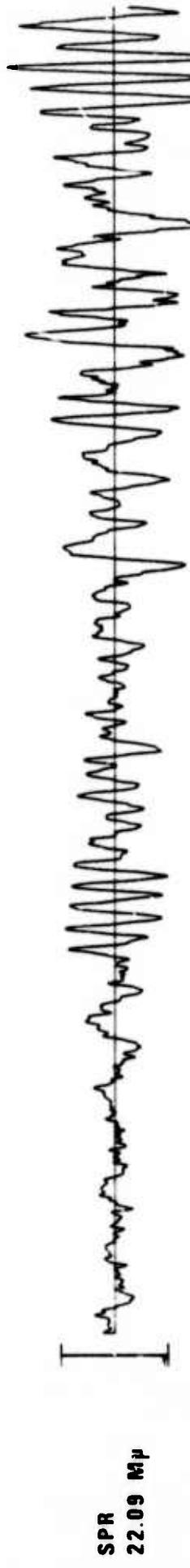
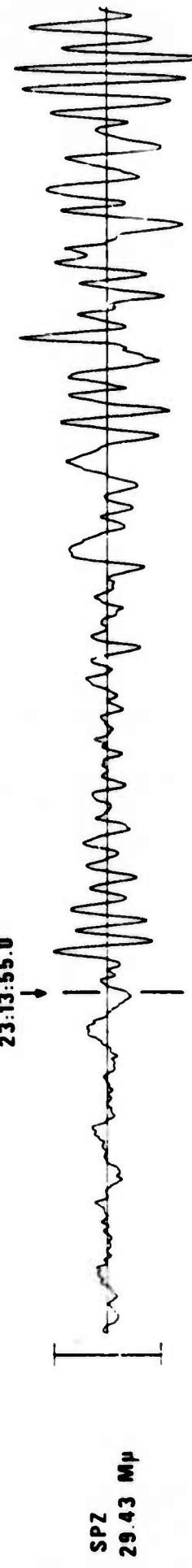


6<

23:13:20

FN-WV 22 AUG 75

23:13:55.0



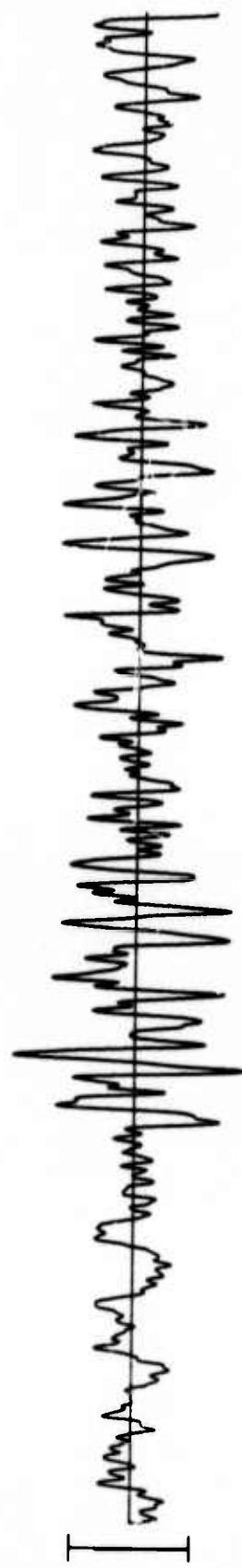
2

RK-ON 22 AUG 75

23:15:15.4



SPZ
29.41 M μ



SPR
17.11 M μ



SPT
12.64 M μ

10 SEC

8<

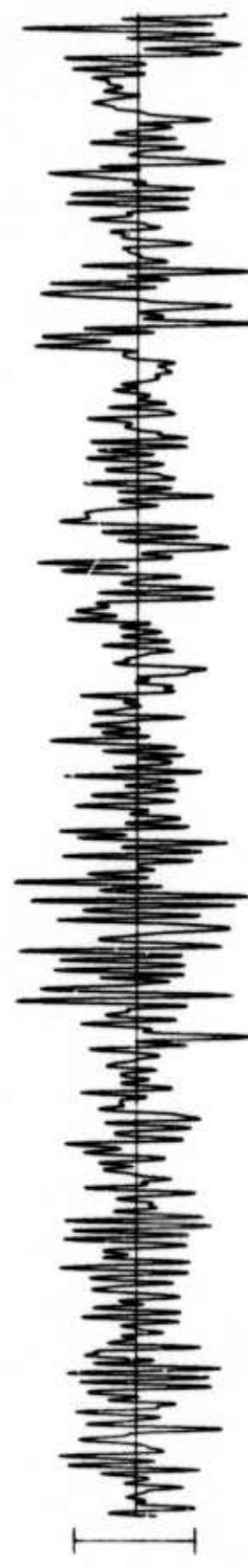
WH2YK 22 AUG 75

23:17:46.1
→

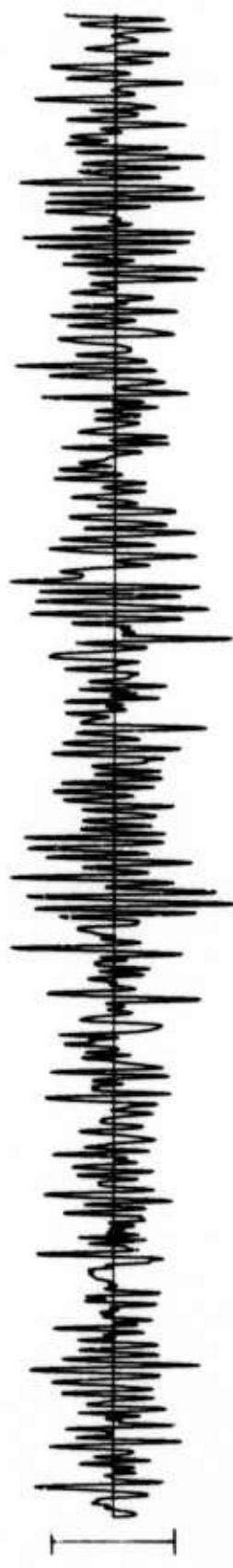
SPZ
13.81 M μ



SPR
10.64 M μ



SPT
14.23 M μ



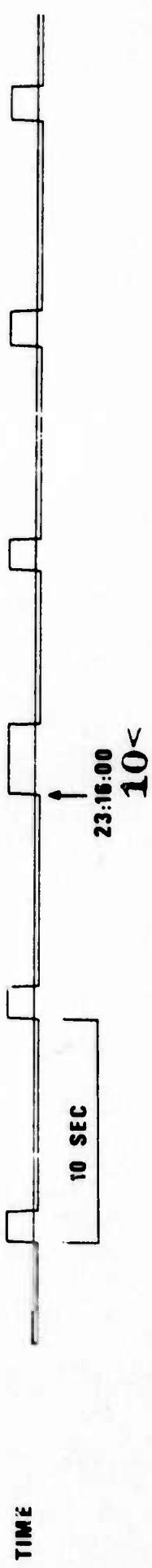
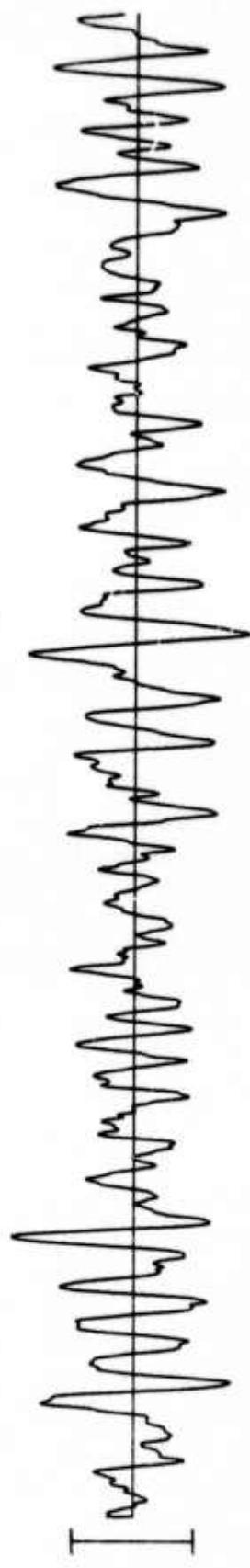
TIME

10 SEC

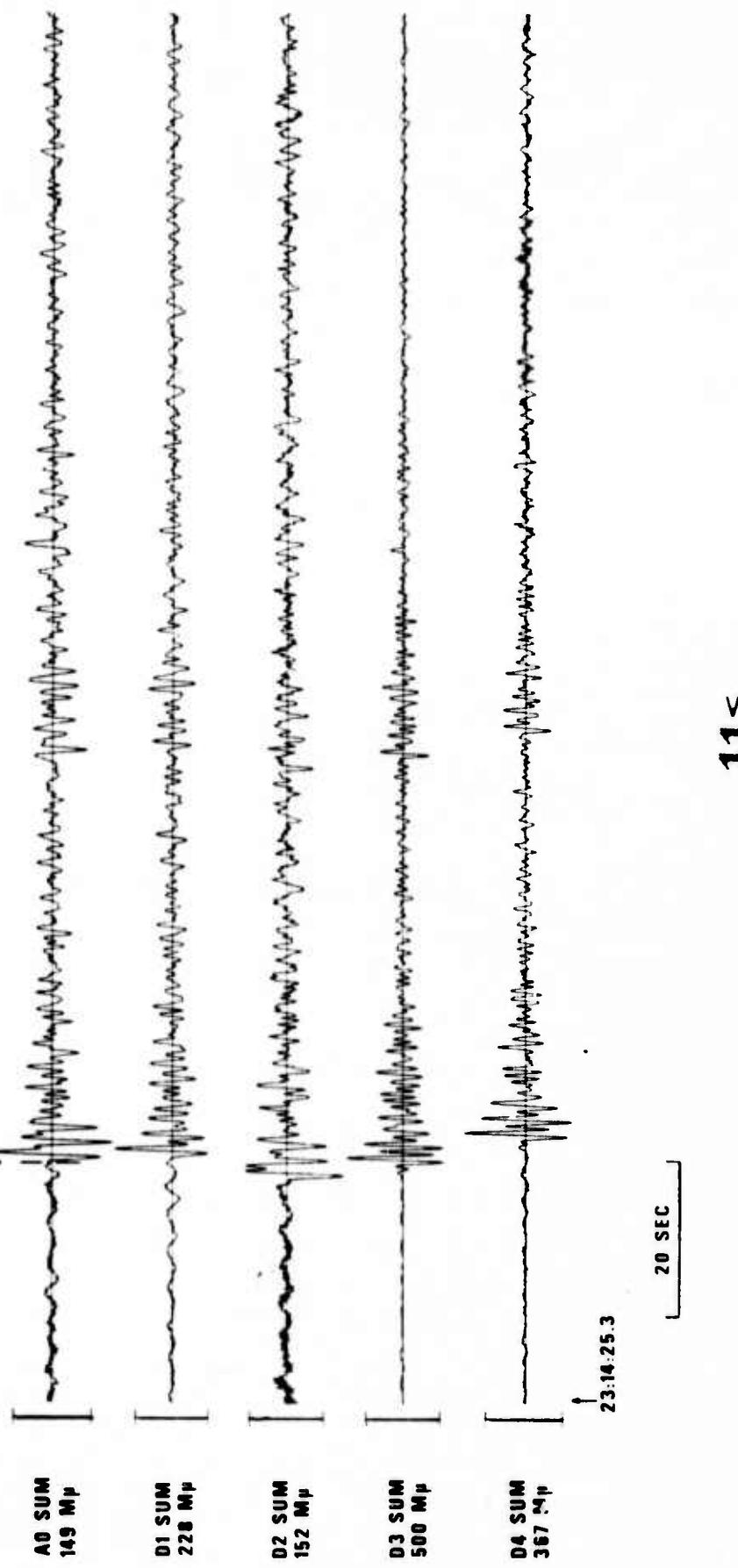
23:18:00
↓

9<

NN-ME 22 AUG 75



LASA INFINITE VELOCITY SUBARRAY SUMS 22 AUG 75
23:14:56.4



11 <

NORSAR EVENT FILE

22 AUG 75

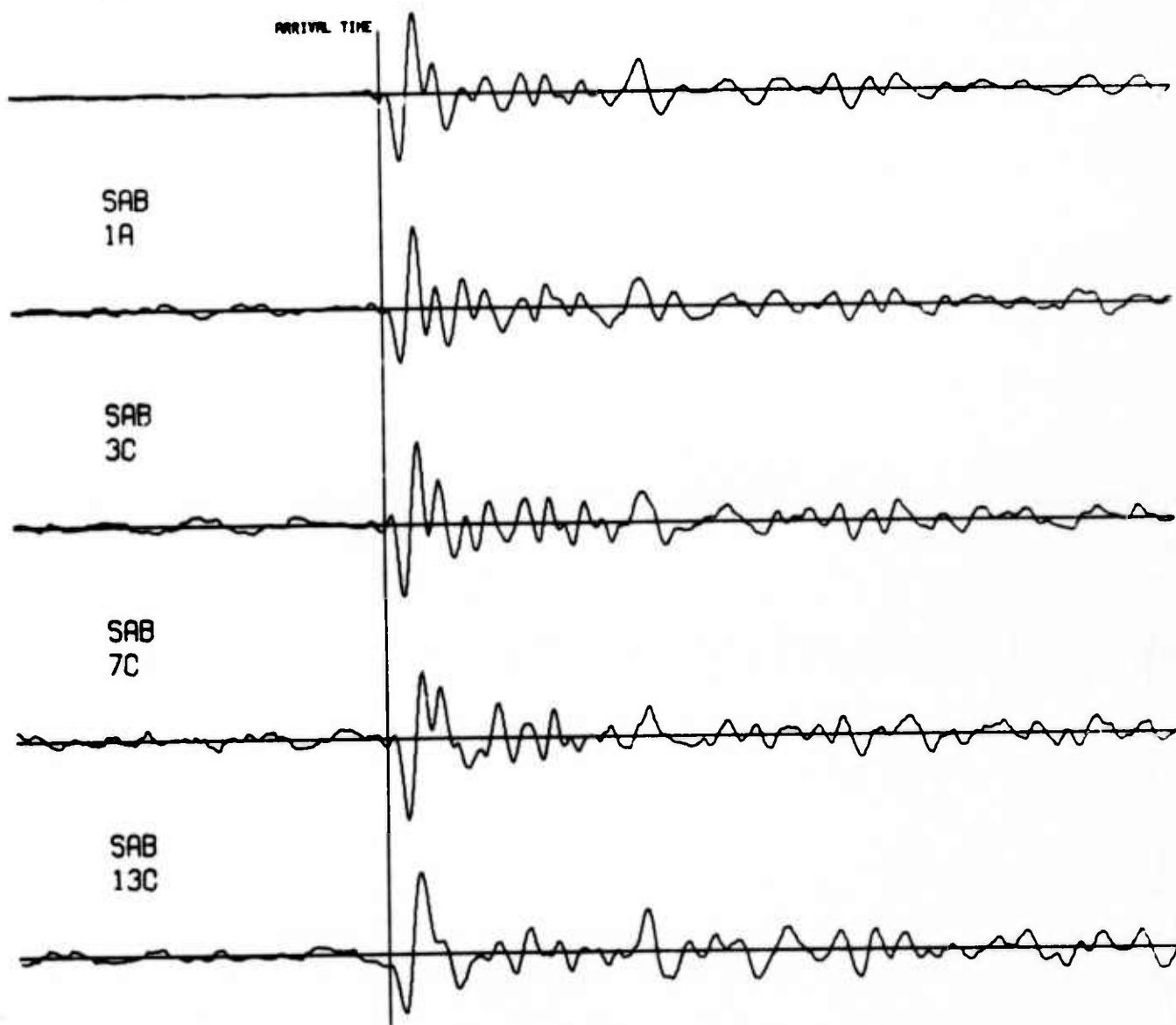
EPX NO. 41080 ARR. 23.20.47.3 11.6N 95.2W 5.5MB 33KM

DIST = 87.6 AZI = 289.5 AMP = 37.2 PER = 1.0

— = 5 SECONDS

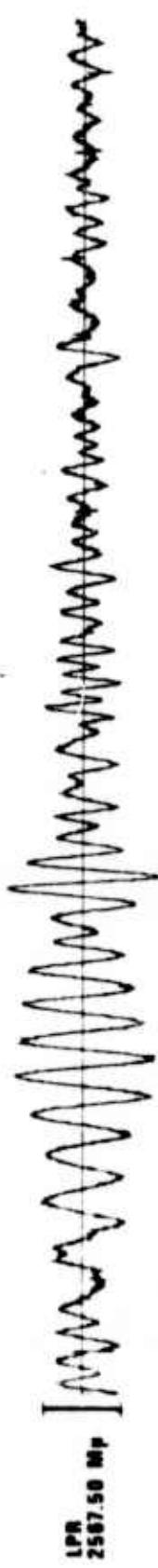
AB

ARRIVAL TIME



CPSO 22 AUG 75

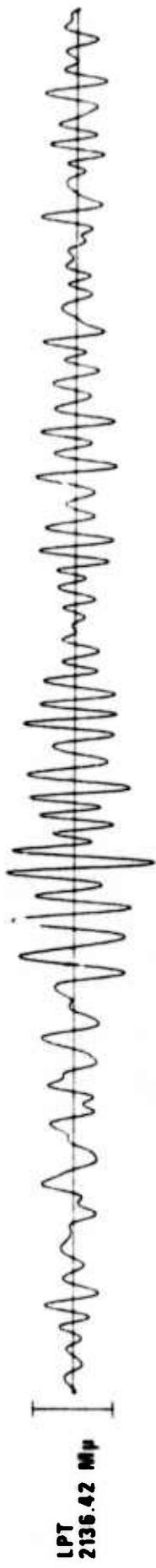
23:23:22



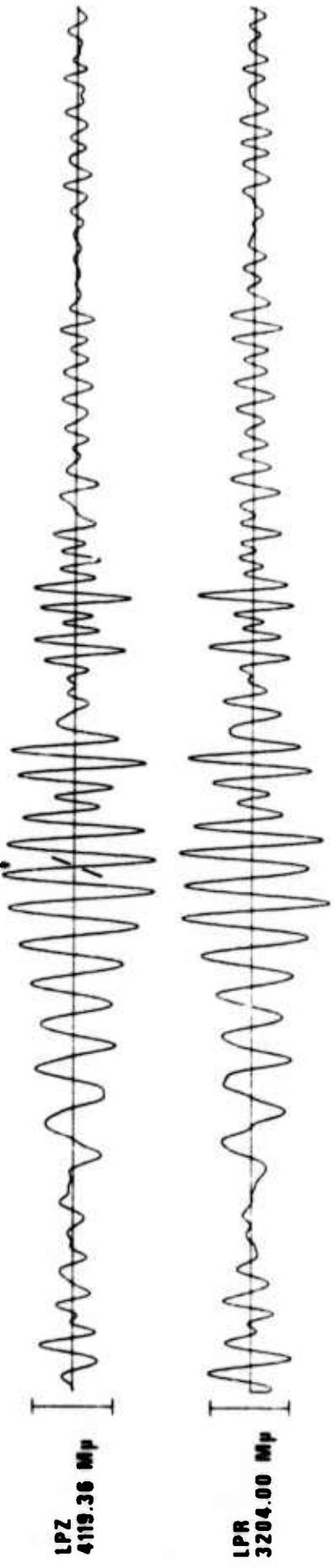
TIME [2 MIN] 23:25:00

13<

14 <



LPT
3204.00 m/s
4115.36 m/s



FM-WW 22 AUG 75

HN-ME 22 AUG 75

23:31:48

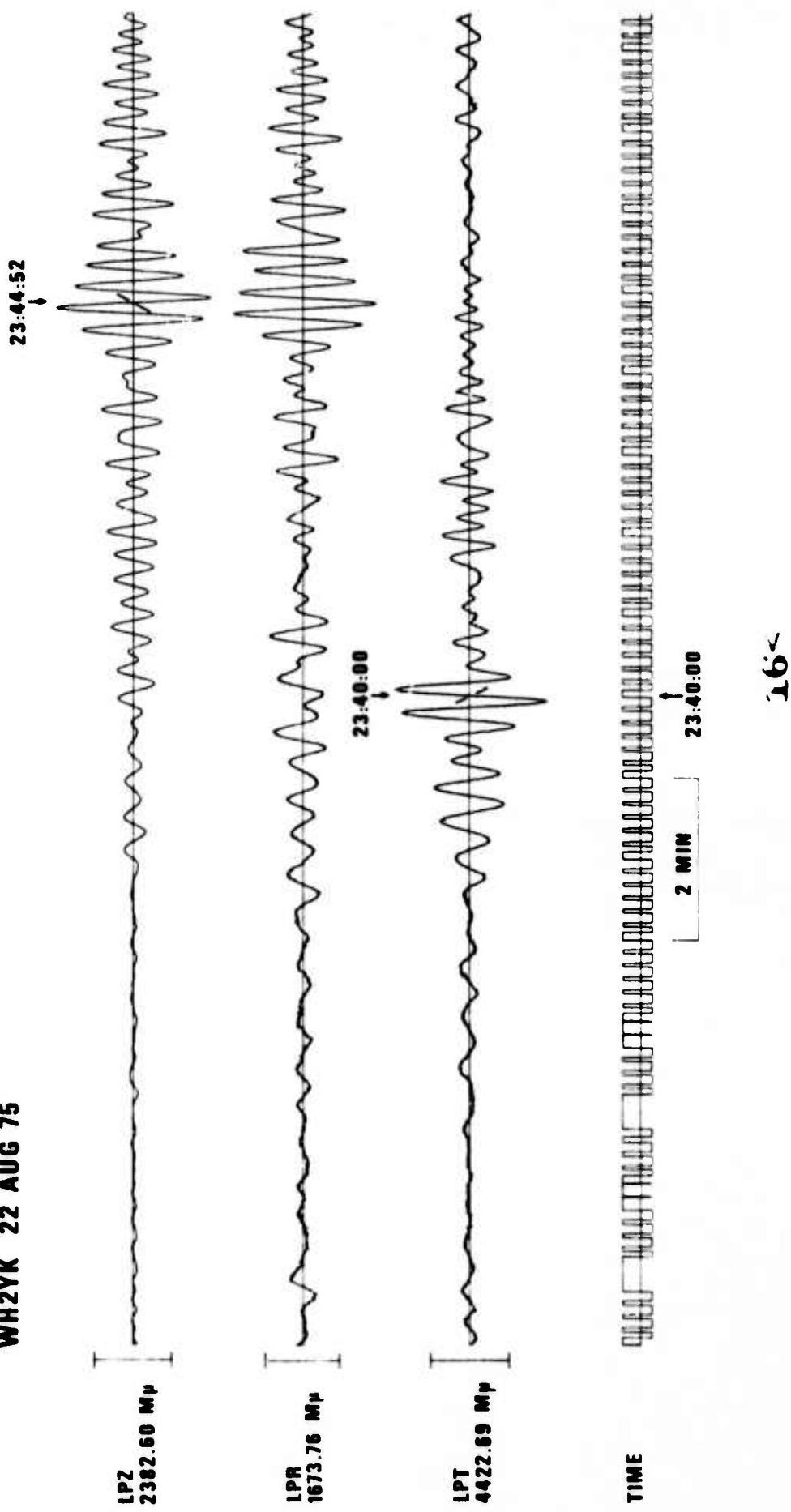


TIME
2 MIN

23:35:00

1.5~

WH2YK 22 AUG 75



RK-ON 22 AUG 75



23:30:00

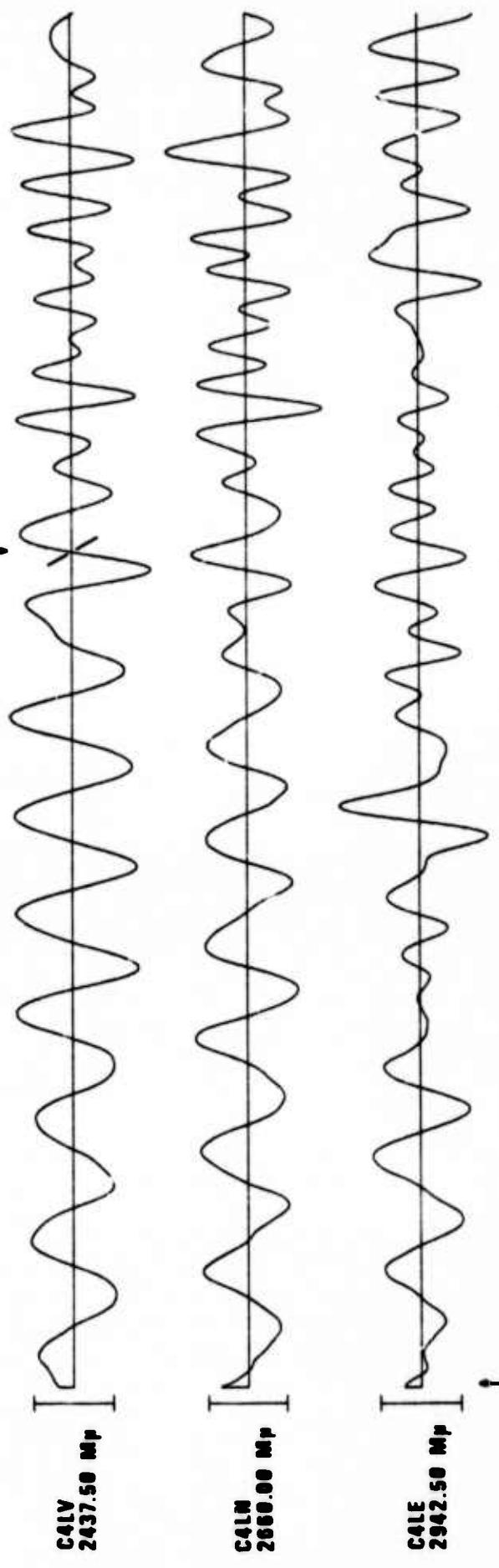
2 MIN

INVALID CALIBRATION

17 >

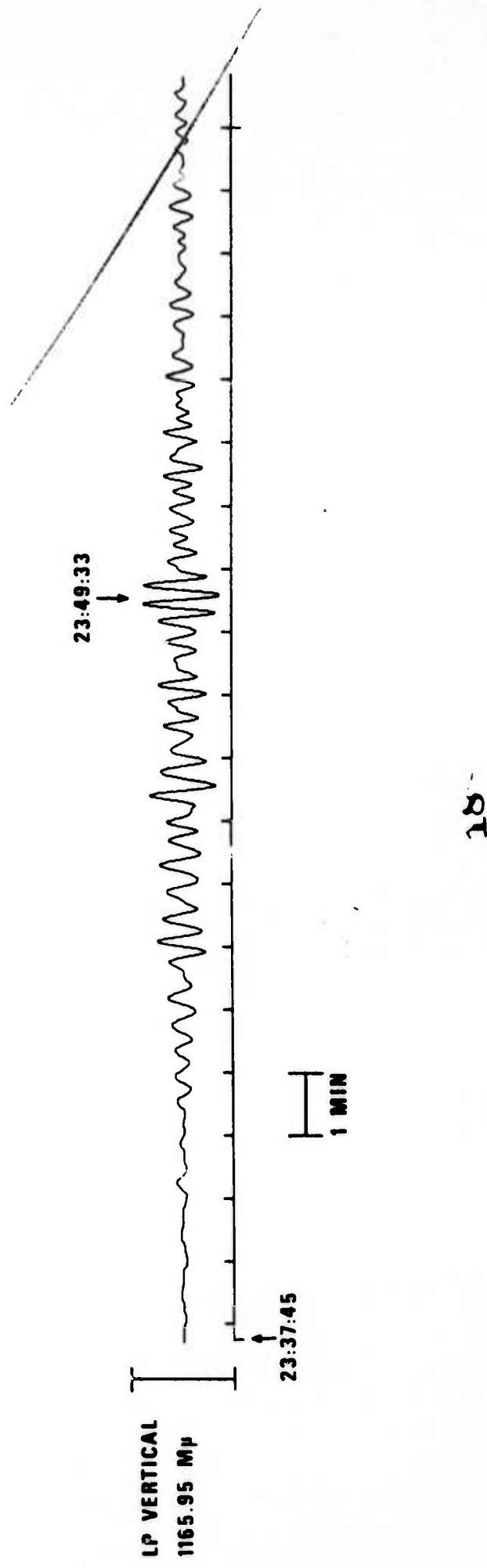
LASA LONG PERIOD C4 SUBARRAY 22 AUG 75

23:30:05



23:20:00.4

ALPA LONG-PERIOD VERTICAL BEAM 22 AUG 75



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